

CLAIMS

1. A congestion control unit comprising:
an input data measurement section for
measuring a quantity of packet data to be inputted; and
5 a packet discarding judgment section for
conducting a discarding judgment of an arriving packet
and outputting a packet not to be discarded into an
output queue and the input data measurement section,
the input data measurement section
10 including a measurement section for outputting a constant
quantity of packet data, which are inputted from the
packet discarding judgment section, at a predetermined
period and also including a smooth queue length
calculating section for accumulating data outputted from
15 the measurement section and outputting a constant
quantity of accumulated data in the predetermined period,
wherein
the packet discarding judgment section
conducts congestion control by a packet discarding
20 judgment based on a smooth queue length which is a
quantity of accumulated data composed of a difference
between a quantity of input data and a quantity of output
data at each predetermined period in the smooth queue
length calculating section.
25 2. A congestion control unit according to claim 1,
wherein the input data measurement section periodically
estimates a tendency of an increase in the smooth queue
length, in the future, from a quantity of data
accumulated in the input data measurement section,
30 informs the packet discarding judgment section of the
result of the estimation of the increase of the smooth
queue length, and conducts batch processing in a period
capable of being estimated, after the period capable of
being estimated has passed.
35 3. A congestion control unit according to claim 2,
wherein the packet discarding judgment section calculates
the time, at which the smooth queue length exceeds a

threshold value, from a quantity of the future increase in the smooth queue length which has been informed, and judges whether an arriving packet is made to pass or is discarded according to the time.

5 4. A congestion control unit according to one of claims 1 to 3, wherein the packet discarding judgment section judges whether an arriving packet is made to pass or is discarded according to the packet discarding probability in which the smooth queue length is used as a
10 parameter.

 5. A congestion control unit according to one of claims 1 to 4, wherein the smooth queue length
calculating section includes a memory device or pointing
device for calculating and displaying a quantity of
15 accumulated data composed of a difference between the
quantity of input data and the quantity of output data.